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ABSTRACT

Career education at the elementary level in Oregon focuses on career awareness and career exploration. At the secondary level a higher degree of experiences is developed in career exploration, which is concerned with self-understanding, occupational exploration, and career information. Career exploration provides experiences in career decision making, cluster orientation, cluster exploration, exploratory work experience, and guidance services. The guidelines offer specific student outcomes for an exploratory career education program for grades 7-10. Subject areas which can provide direct career exploration experiences include industrial arts, home economics, business education, social studies, science/health, and economics. The relation of these areas to various occupations are charted. Suggestions for teaching procedures which include career exploration activities are offered for the following subjects: science, math, social studies, English, industrial arts, homemaking, art, music, physical education, and health. Ways of implementing exploratory activities in small schools are discussed. (EC)

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Guidelines for Implementing Career Exploration In the Early Secondary School Years

State Department of Education
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Career Education
May 1975

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INTRODUCTION

Overview of Career Education

A society's survival is dependent on how well its members perform certain roles. The Oregon State Board of Education, in cooperation with the educational community, has identified six life roles in which students should demonstrate proficiency; learner, individual, producer, citizen, consumer, and family member.

A comprehensive learning system must provide opportunities for each student to explore and prepare for these and other roles at the appropriate interest and comprehension level. These life roles are a framework for a contemporary curriculum.

Career education, as an integral part of the curriculum endorses the concept that each individual must learn to function effectively in the identified life roles. The major focus of career education, however, is the role of producer. Learning experiences within the curriculum should be provided to develop attitudes, knowledge, and skills that will help students become aware of the many careers through which to fulfill the role of producer and enable them to perform successfully in the occupation of their choice. The acquisition of the knowledges and skills essential to performance as a producer will assist in related life roles.

Career education in Oregon encompasses learning experiences from the elementary through the post-secondary levels, and has three primary objectives: (1) promote learning about self in the world of work; (2) provide opportunities to explore occupational fields; and (3) provide opportunities for career preparation leading to employment and/or further training.

The career education program begins with the students' earliest schooling experiences and extends through their adult life. It encompasses:

- o The development of Career Awareness, usually in grades K-6, but also provided at other levels for students who are at that point in their career development.
- o Opportunities for Career Exploration, emphasized in grades 7 through 10, but also available to all secondary and post-secondary students and adults.
- o Occupational Preparation centering on career cluster programs at the 11th and 12th grade levels.
- o Occupational Specialization through occupational preparatory and supplementary programs usually offered through community colleges, apprenticeship, private vocational-technical schools and four-year colleges and universities.
- o Career Guidance services available at all levels to give continuity to the students' career development.

CAREER AWARENESS AT THE ELEMENTARY LEVEL

Career education objectives are manifest at the elementary level as career awareness. The career-focused curriculum is not a separate subject, but is developed in each classroom within traditional subject matter areas. The scope of each subject changes to incorporate the many occupational careers related to the topic being studied.

As with the entire career education program, career awareness emphasizes the producer role and its relationship with the other life roles. Moreover, the dignity of all work is stressed by examining the contributions of a variety of occupations to society. The student is the focal point of Career Awareness learning activities intended to initiate the career development process. As a

departure point, students are encouraged to examine personal needs in relation to various occupations.

An awareness program provides opportunities for learners to actively participate in:

- Making decisions that relate to their career development.
- Discovering occupational aptitudes and interests.
- Identifying individual learning styles (the way they learn best).
- Expressing self-awareness as it relates to career development, occupational interest, and the role of the producer.

CAREER EXPLORATION AT THE ELEMENTARY LEVEL

As exploration commences, increased depth of experience is provided. The "Self Understanding Through Occupational Exploration" (SUTOE) experience, as developed by the State Department of Education, can serve as an introduction to the exploration process. The "self-understanding" aspect of SUTOE is accomplished through reviewing one's interests, aptitudes, attitudes, and abilities in relation to the many careers that are available through proper preparation. Standardized testing instruments such as the Ohio Vocational Interest Survey (OVIS), the Employment Services' General Aptitude Test Battery (GATB) and Interest Check List (ICL), Kuder Interest Tests, and various scholastic aptitude and achievement tests are utilized in assisting the student in self-understanding.

Additionally, as students begin to express interests in various areas of producing goods and/or services, they should have access to accurate and current career information. The Career Information System (CIS), which is available to all Oregon schools through computer or needlesort capabilities, provides one

such source. Various commercially produced kits are also available to provide initial cursory introduction to various careers.

Students at this stage of career development can be introduced to basic economic principles as they apply to the producer and consumer life roles. Why and where people work to meet life's creative and financial needs can be approached through appropriate activities and units of study. Various programs and materials are available locally and commercially to lay foundations for later in-depth study of the very important implications that work and working have to each of the six life roles.

It is not intended that this brief exposure to economics be the students' last, but rather that it be designed to alert them to the part that economic principles now play and will increasingly play as they enter the work force as a producer and consumer of goods and/or services.

Several variations are available to local districts who wish to establish such programs in their curricula. Contact the State Department of Education for information about these programs.

CAREER EXPLORATION AT THE SECONDARY LEVEL

Whereas the SUTOE experience provides a "data," "people," "things," orientation to careers, additional factors such as worker traits, training requirements, and resulting compensations must become sufficiently familiar to students so as to become a part of their considerations in selecting areas of exploration within the cluster framework.

To provide increased depth of experience within decreasing breadth of exposure, several approaches are suggested.

Career Decision Making

The greater one's insight into his/her individual strengths and weaknesses, interests and aptitudes, likes and dislikes in relation to various areas of employment, hopefully, the more realistic career decisions one should be able to make.

This understanding must be couched within the framework of decision-making process wherein values are assessed and various alternatives are formulated and studied in the light of attending responsibilities. The SUTOE program, as well as many commercially produced materials, provide suggested activities and approaches to presenting and conducting the decision-making process.

Cluster Orientation

It is imperative that all students, regardless of educational aspirations, become conversant with the cluster concept and aware of Oregon's cluster organization.

To accomplish this, several approaches have been utilized. The first incorporates individualized learning packages designed to quickly acquaint the student and teacher with the cluster concept. Through a simplified study of the clustering process and an investigation of Oregon's presently identified clusters, the student becomes sufficiently familiar with the process to conduct meaningful in-depth investigation of those clusters that hold an interest for him/her. These packages are available through the State Department.

The second approach utilizes instructional modules of varying lengths wherein exposure to each cluster is provided through a combination of classroom, laboratory, and on-site exposures. Several schools have implemented such experiences within a "cruise" setting whereby students explore a given number of cluster areas in which they are interested for specified periods of time. Experience has shown that providing such experiences on a nongraded basis encourages the exploration of areas in which students would not normally try for fear of poor grades.

Both approaches can be conducted as separate courses or integrated within the existing curriculum of most schools.

Cluster Exploration

An in-depth study of the clusters must be provided within interest areas of each student that provides introductory hands-on experiences in the basic skills common to the cluster. This exposure most logically would occur at grade level ten.

Exploratory courses of up to a semester duration are viewed as essential to this effort. Inasmuch as most sophomore students have at least two electives, it is not unreal to provide explorations within four cluster areas for each student preparatory to selection of a cluster program commencing with grade level 11. Should a student find an area of major interest during the first semester experience, continued instruction in that cluster must be available through the second semester.

The instructional program should involve the cluster teacher at this level; not that he or she will be responsible for the entire instructional program,

but that they will be intimately involved with what is taught, and how it is presented. On-site explorations of reduced frequency but increased length are characteristic of this exposure.

Exploratory Work Experience

To obtain maximum benefits from the career exploration phase of development, the program must provide orientation to, and in-depth, on-site exploratory experiences in occupations that are representative of the identified career clusters. Length and breadth of exposure must be sufficient to provide insights into the cluster as a possible means of livelihood. Care should be taken to expose all students to as many clusters as possible to provide a framework for eventual selection of a single cluster in preparation for skills acquisition.

The concepts of the total educational experiences can take on added individual meaning through firsthand application to job situations and in-class reports of other students relative to their on-site job experiences. For this reason, students should be introduced to and encouraged to experience on-site exposure to occupations closely related to all subjects. As such, it is equally important that a student with interests and aptitudes in mathematics and science be permitted to spend time with persons who are employed in occupations that depend heavily upon these skills as it would be for an industrial arts or office occupations student to visit areas of mechanical and/or office-related skills.

Guidance Services

Guidance and counseling services must be readily available throughout the career selection process, but especially during the exploration phase. Defensible career decisions at this level of development, tentative though they may be,

can lend direction to the remaining years of the formal school experience and throughout adult life.

ESSENTIAL ELEMENTS OF A CAREER EXPLORATION PROGRAM

In summary, it is recommended that students should gain experiences in each of the following areas. To provide less than this would result in students who are ill-prepared to commence the occupational preparatory process:

1. Basic knowledge of economics as it affects work and living.
2. Self-understanding of occupational interests and aptitudes.
3. Decision making as it applies to career selection and preparation.
4. Basic knowlege of the occupational clustering process and the available clusters.
5. Understanding of and first-hand experience with the basic knowledge and skills common to each cluster.
6. Observation of and on-site work experiences in occupations that are representative of the clusters or job families within the students' area of interests.

At this stage of educational development most of the resulting knowledges and skills will serve a dual role, that of providing information and "know how" for immediate and long-range occupational or avocational application; but more importantly of introducing students to job requirements and compensations as one aspect of the occupational selection process. This information, when coupled with the expanded insight into their interests and aptitudes and an increased understanding of the economics of work and leisure-time activities, will assist students in selecting those careers wherein they are most likely to find success and personal satisfaction.

SPECIFIC STUDENT OUTCOMES
FOR AN
EXPLORATORY CAREER EDUCATION PROGRAM

In the planning and development of an exploratory career education program, it is imperative that student outcomes be determined. They should be based on present, as well as future, student needs. Because of the varying backgrounds and needs of students, the final list of outcomes will vary. Outcomes for each grade will help to insure program continuity.

The outcomes listed below are not complete, but will provide ideas and guidance for developing measureable objectives for which activities can be provided and by which evaluation procedures can be established. This is consistent with Oregon's competency-based graduation requirements.

As such, student outcomes will have already been developed in the basic skills of reading, writing, listening, and computing that are essential to career exploration activities. The below suggested outcomes deal directly with expected career exploration competencies:

By the end of Grade 7 each student should:

a. demonstrate reasonable proficiency with common household tools such as hammer, screw driver, pliers, wrench, saw, and others,
b. be able to use a newspaper to find "help wanted" and "work wanted" ads,
c. understand selected basic economic principles as they affect working and living,
d. know why people work and what adjustments may need to be made if they choose not to work,
e. understand that there is more to working than monetary compensations,
f. have in mind several factors to consider in looking for an occupation in which he or she could be successful,

g. be able to give reasons as to why he or she selected elective classes for grade 8.

By the end of Grade 8, each student should:

a. understand the reason for stringent grooming and health standards in certain occuaptions,

b. be able to demonstrate proper usage of the telephone for inquiring about a job listed in the newspaper,

c. know the major businesses and industries in the communities and some of the occupations found in each,

d. understand why most people work in several occupations during their lifetime,

e. be conversant with people from several different occupations, know their work histories and factors which led to their establishment in their present occupations.

By the end of Grade 9, students should:

a. be able to demonstrate an understanding of their strengths and weaknesses in relationship to occupations requiring close association with data, people, and things,

b. know how to properly apply and interview for a given job,

c. understand the Oregon clustering concept, know the clusters available to them, and explain an interest or disinterest in the available clusters for further exploration,

d. have spent sufficient time in on-site visitation of several occupational areas as a basis for expressing interest or disinterest in further exploration.

By the end of Grade 10, students should:

a. be able to locate specific occupational information in the Dictionary of Occupational Titles, Occupational Outlook Handbook, and/or some other standard reference source,

b. be aware of their interests and aptitudes in relaion to broad occupational families or clusters requirements,

c. have had in-depth exposure to the Oregon occupational clusters, and have explored those clusters of interest to them,

d. have expressed a broad tentative career choice and be able to explain the basis of this decision,

e. be able to identify factors involved in securing and holding a job.

MEETING OREGON'S GRADUATION REQUIREMENTS

Many of the above competencies will nearly coincide with the local districts' career development aspect of the graduation requirements. Career exploration instruction can likewise provide a portion of the required hours and credits. Administrators and curriculum coordinators would do well to utilize the exploration phase of career development to provide sizeable portions of both aspects in meeting the minimum career competencies of the graduation requirements.

UTILIZING SUBJECT MATTER DISCIPLINES FOR CAREER EXPLORATIONS

Every area of the curriculum has inherent career exploration potential. Some, by the nature of subject matter, are more closely related to the producer life role. Accordingly, Agriculture, Business Education, Home Economics, Industrial Arts, Science/Health, and Social Studies with minor change of emphasis become the core of the career exploration experience as follows:

Industrial Arts

The Industrial Arts program can easily provide exploratory experiences to both boys and girls in varying degrees of depth.

By relating industrial technologies to jobs in business and industry, and allowing students to view these technologies in an actual job setting, the students will not only become acquainted with the attending skills and knowledges, but will be introduced to their use in the world of work. Through on-site observation, the student will gain insights and initial reactions to the desirability of a variety of related occupations as possible future careers.

Exploratory experiences in six of the established fourteen occupational clusters logically fall within the industrial arts area of instruction:

Mechanical and repair occupations

Construction occupations

Electrical occupations

Graphic Arts occupations

Metal workers' occupations

Forest products occupations

A composite of basic knowledges and skills as they appear in the task analyses of these clusters becomes the basis of the Industrial Arts instructional program. The key occupations (shown on the following page) within each cluster lend direction to the utilization of community resources for classroom visitation and on-site observation/work experience.

The I.A.C.P. programs in the World of Manufacturing, Construction, and Business also offer many opportunities for gaining the attitudes, understandings, and

skills that will be required of most students sometime during their lives. These programs compliment the exploratory concepts herein proposed.

The "occupational versatility" approach to instructional management provides a proven approach to maximizing staff and facilities utilization. By utilizing notebook-directed activities within each of the cluster areas, every student gains familiarity with basic skills common to large numbers of occupations but within a cluster orientation.

This approach can likewise facilitate on-site job experiences in key occupations by inclusion of such activities within each instructional area.

The advanced industrial arts program can also serve as a continued exploratory experience for those who have difficulty in selecting, or consciously chooose not to participate in, an occupational cluster program. It is conceivable that a senor high school boy or girl who is preparing for a professional degree in engineering would, because of a heavy academic load, choose to become reasonably proficient in drafting and procure basic electrical theory and/or mechanical skills through the Industrial Arts program rather than acquiring the depth of understanding and skill that is common to the cluster programs.

Home Economics

Homemaking at the junior high school level can begin to lay foundations for the knowledges and skills required in establishing and maintaining a home and family, while at the same time relating to occupations which require the same or related skills. The key occupations within the clusters related to home economics are shown on the following page.

Business Education

The business educational offerings of the junior high program can likewise contribute to more specific preparations and create awareness of interest for personal or avocational needs. Through exposure to the multitudes of occupations that rely upon business and office-related skills, the student can project his or her abilities and interests into preparation within the clerical, marketing, secretarial, and bookkeeping and accounting cluster programs. Manifold resources are available to the teacher to provide actual and vicarious experiences to the students in preparation for tentative career decisions in these areas of occupational preparation.

Social Studies

The social services occupations, because of their broad preparational requirements, are indirectly related to most of the clusters; but require visibility through explorations more specifically oriented to their individual requirements. A reorientation of the existing Social Studies program could provide these experiences as an integral instructional part. A task analysis again serves as an indicator of those required basic knowledges and skills. In-class and out-of-class exposures of varying durations can orient students to the specifics of each key occupation (shown below) as it is representative of the area of employment.

Science/Health

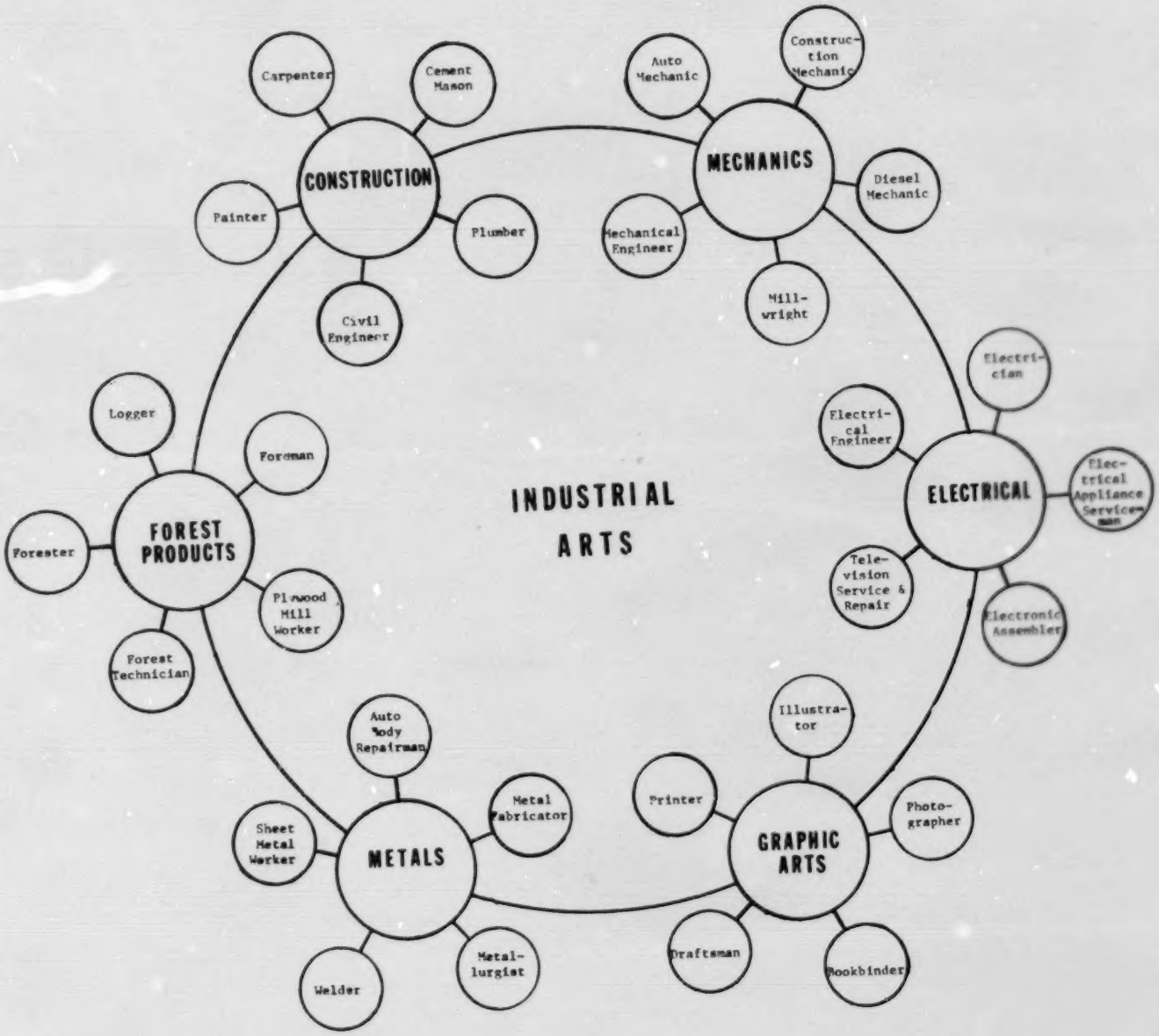
The science courses at this level provide basic knowledges and skills needed in health-related occupations. By relating these skills to applications within this area of employment, and providing on-site observations and limited applications, the interested student becomes better able to objectively view health occupations as a possible future area of employment.

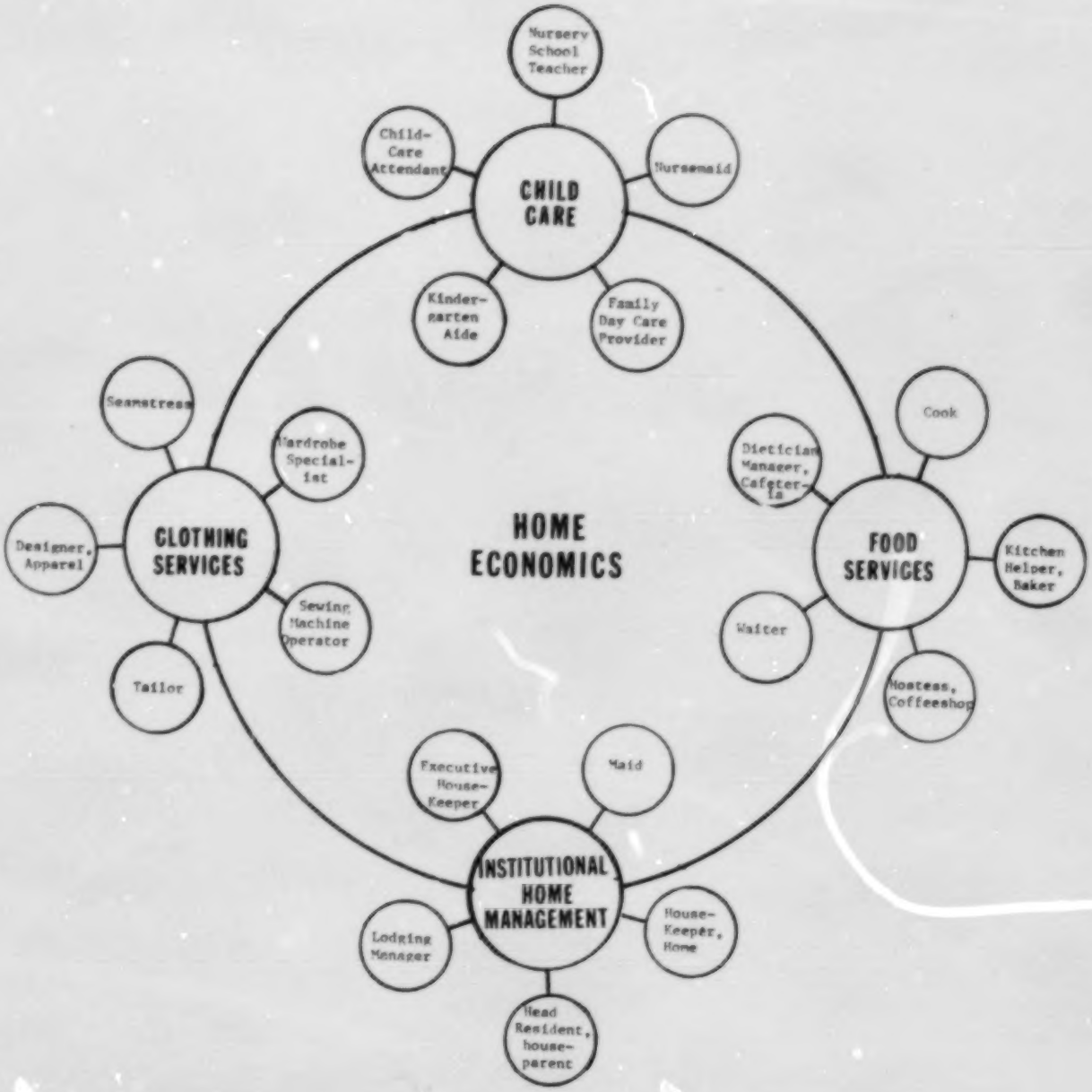
The Health program provides a natural avenue for introducing health-related occupations as well as the health cluster. Classroom instruction can be enhanced through utilization of the job setting. Resource persons at all levels of training can be invited to participate so as to show the total health career ladder.

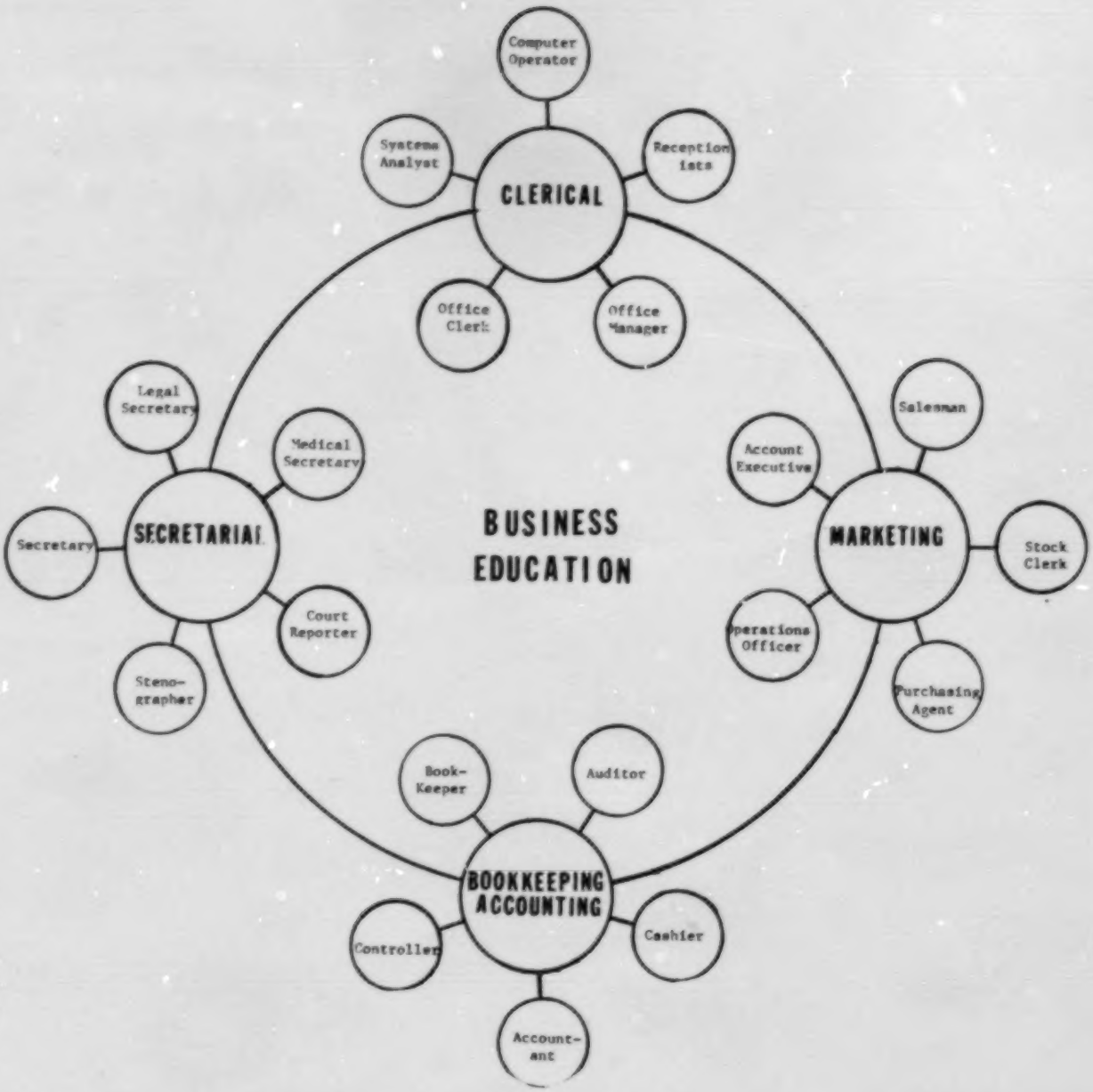
Vocational Agriculture

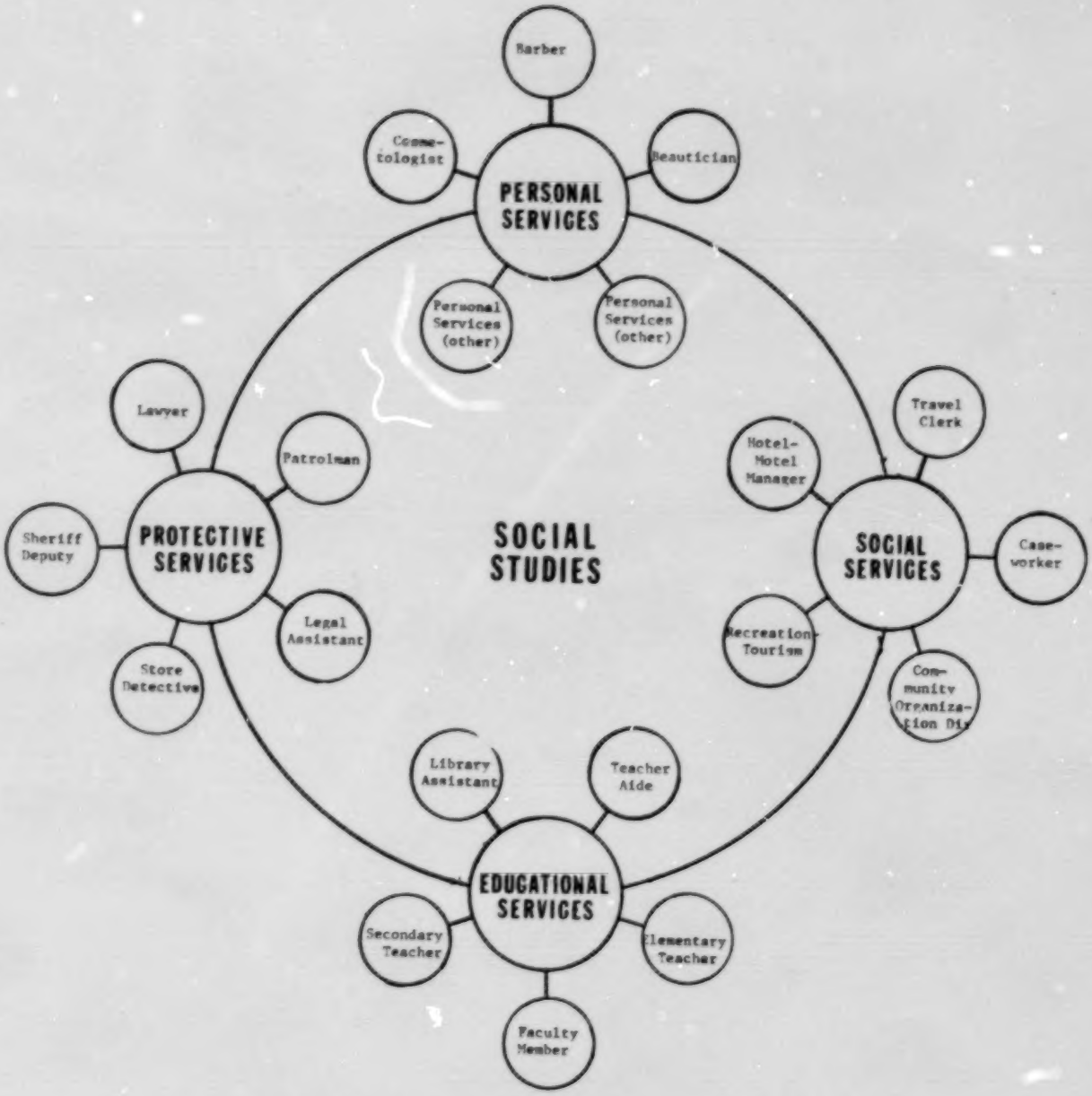
The vocational agriculture program has traditionally been inclusive of grade level 9-12. Through an expanded program of explorations in the traditional area of farm production, plus the more recent areas of forestry, horticulture, and agricultural business, students will be led to view this cluster as more broad than initially perceived.

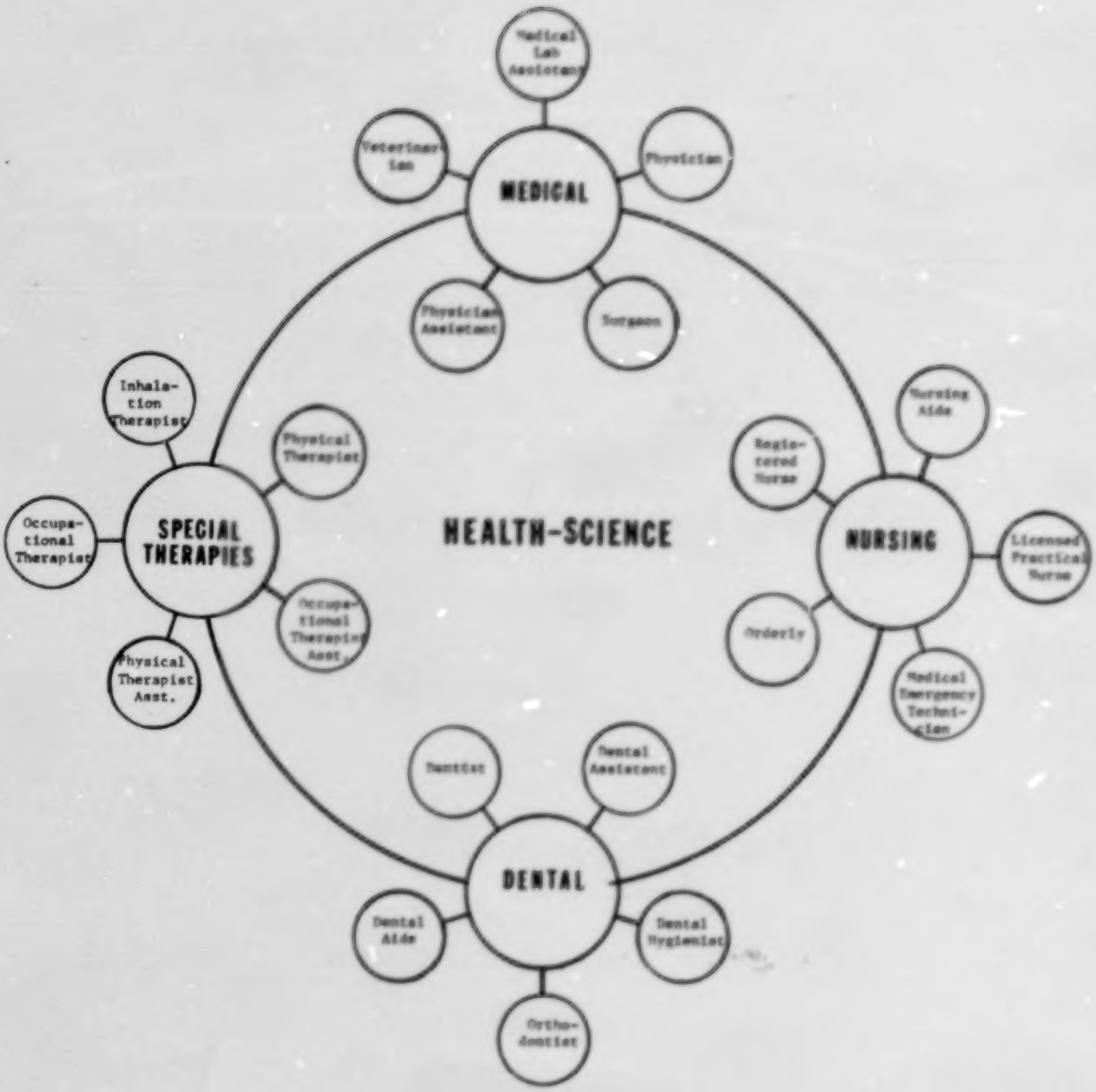
Where a vocational agriculture program is not available to conduct the exploration activities, the sciences program provides a second vehicle. Both the biological and physical sciences find broad application in agriculturally related occupations as appear on the following page.

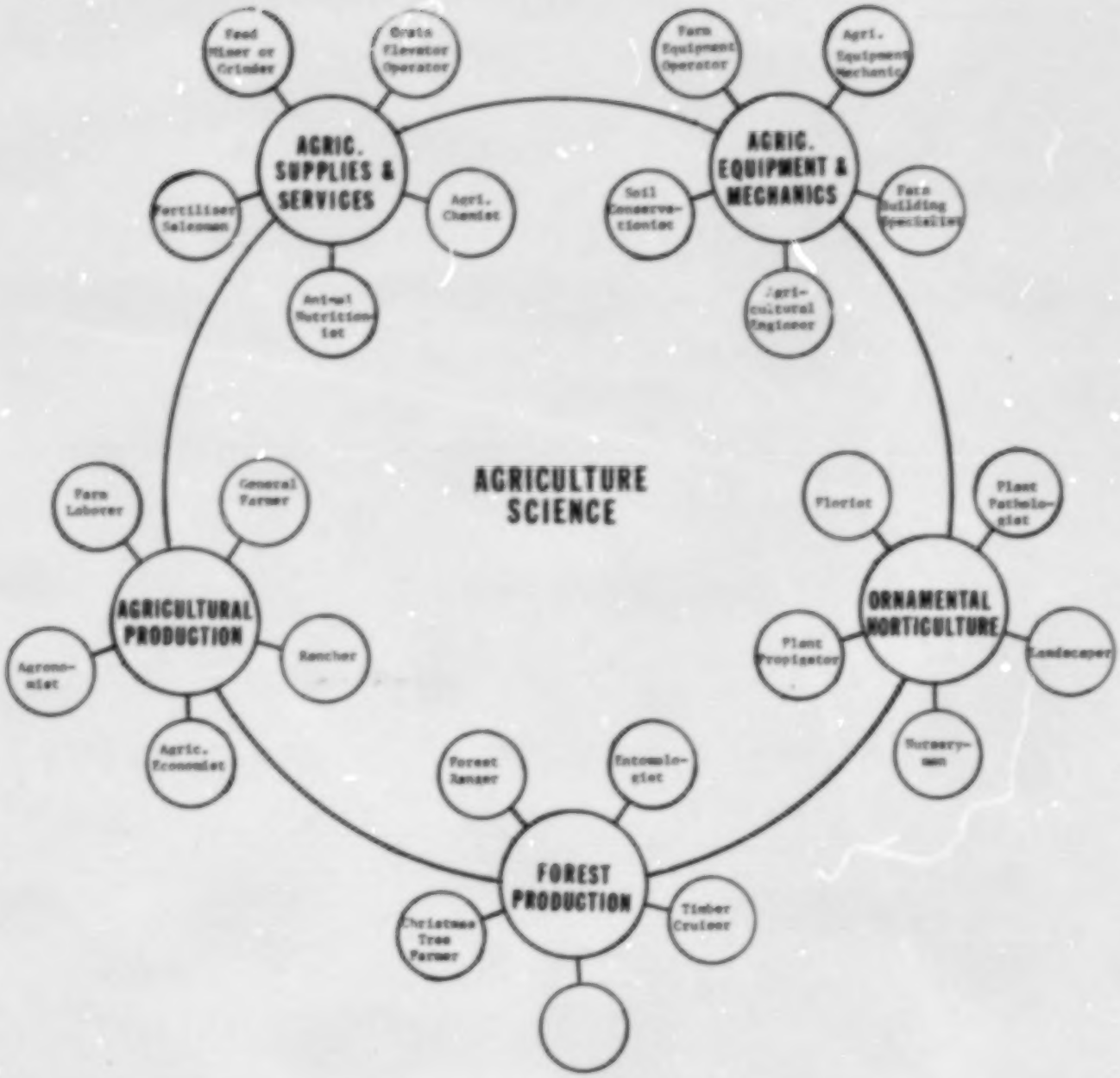

INDUSTRIAL ARTS
CONSTRUCTION
Carpenter
Cement Mason
Painter
Plumber
Civil Engineer
MECHANICS
Auto Mechanic
Construction Mechanic
Diesel Mechanic
Mechanical Engineer
Mill-wright
ELECTRICAL
Electrician
Electrical Engineer
Electrical Appliance Serviceman
Television Service & Repair
Electronic Assembler
GRAPHIC ARTS
Illustrator
Printer
Photographer
Draftsman
Bookbinder
METALS
Auto Body Repairman
Metal Fabricator
Sheet Metal Worker
Welder
Metallurgist
FOREST PRODUCTS
Logger
Foreman
Forester
Plywood Mill Worker
Forest Technician


HOME ECONOMICS
CHILD CARE
Nursery School Teacher
Child-Care Attendant
Nursemaid
Kinder-garten Aide
Family Day Care Provider
CLOTHING SERVICES
Seamstress
Wardrobe Special-ist
Designer, Apparel
Sewing Machine Operator
Tailor
FOOD SERVICES
Cook
Dietician Manager, Cafeter-ia
Kitchen Helper, Baker
Waiter
Hostess, Coffeeshop
INSTITUTIONAL HOME MANAGEMENT
Executive House-keeper
Maid
Lodging Manager
House-keeper, Home
Head Resident, house-parent


BUSINESS EDUCATION
CLERICAL
Computer Operator
Systems Analyst
Receptionists
Office Clerk
Office Manager
SECRETARIAL
Legal Secretary
Medical Secretary
Secretary
Court Reporter
Steno-grapher
MARKETING
Salesman
Account Executive
Stock Clerk
Operations Officer
Purchasing Agent
BOOKKEEPING ACCOUNTING
Book-Keeper
Auditor
Controller
Cashier
Account-ant


SOCIAL STUDIES
PERSONAL SERVICES
Barber
Cosmetologist
Beautician
Personal Services (other)
Personal Services (other)
PROTECTIVE SERVICES
Lawyer
Patrolman
Sheriff Deputy
Legal Assistant
Store Detective
SOCIAL SERVICES
Travel Clerk
Hotel-Motel Manager
Case-worker
Recreation-Tourism
Community Organization Dir
EDUCATIONAL SERVICES
Library Assistant
Teacher Aide
Secondary Teacher
Elementary Teacher
Faculty Member

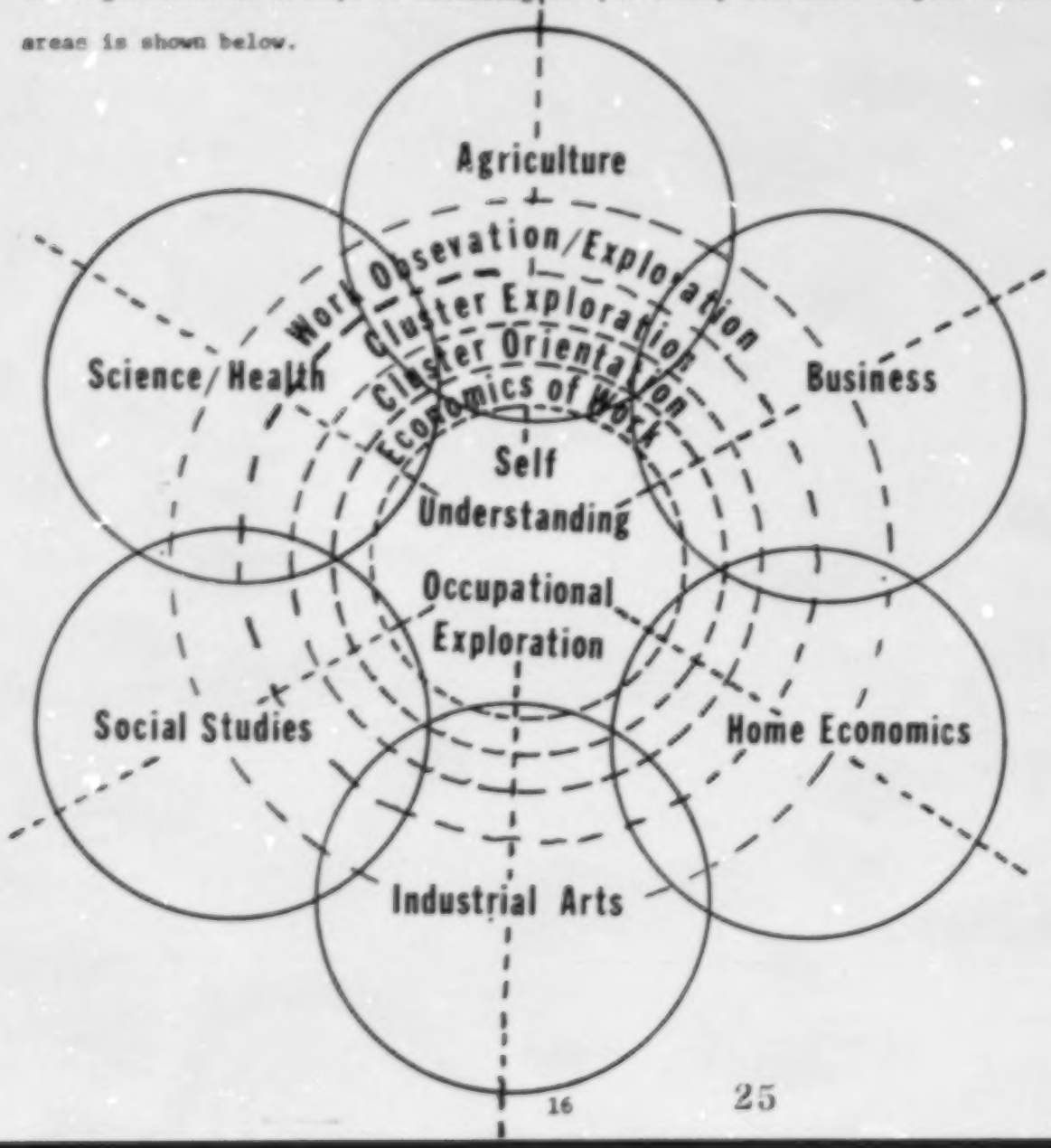

HEALTH-SCIENCE
MEDICAL
Medical Lab Assistant
Veterinarian
Physician
Physician Assistant
Surgeon
NURSING
Nursing Aide
Registered Nurse
Licensed Practical Nurse
Orderly
Medical Emergency Technician
DENTAL
Dentist
Dental Assistant
Dental Aide
Dental Hygienist
Orthodontist
SPECIAL THERAPIES
Inhalation Therapist
Physical Therapist
Occupational Therapist
Occupational Therapist Asst.
Physical Therapist Asst.


AGRICULTURE SCIENCE
AGRIC. SUPPLIES & SERVICES
Feed Mixer or Grinder
Grain Elevator Operator
Fertilizer Salesman
Agri. Chemist
Animal Nutritionist
AGRIC. EQUIPMENT & MECHANICS
Farm Equipment Operator
Agri. Equipment Mechanic
Soil Conservationist
Farm Building Specialist
Agricultural Engineer
AGRICULTURAL PRODUCTION
Farm Laborer
General Farmer
Rancher
Agronomist
Agric. Economist
ORNAMENTAL HORTICULTURE
Florist
Plant Pathologist
Plant Propagator
Landscaper
Nurseryman
FOREST PRODUCTION
Forest Ranger
Entomologist
Christmas Tree Farmer
Timber Cruiser

Economics

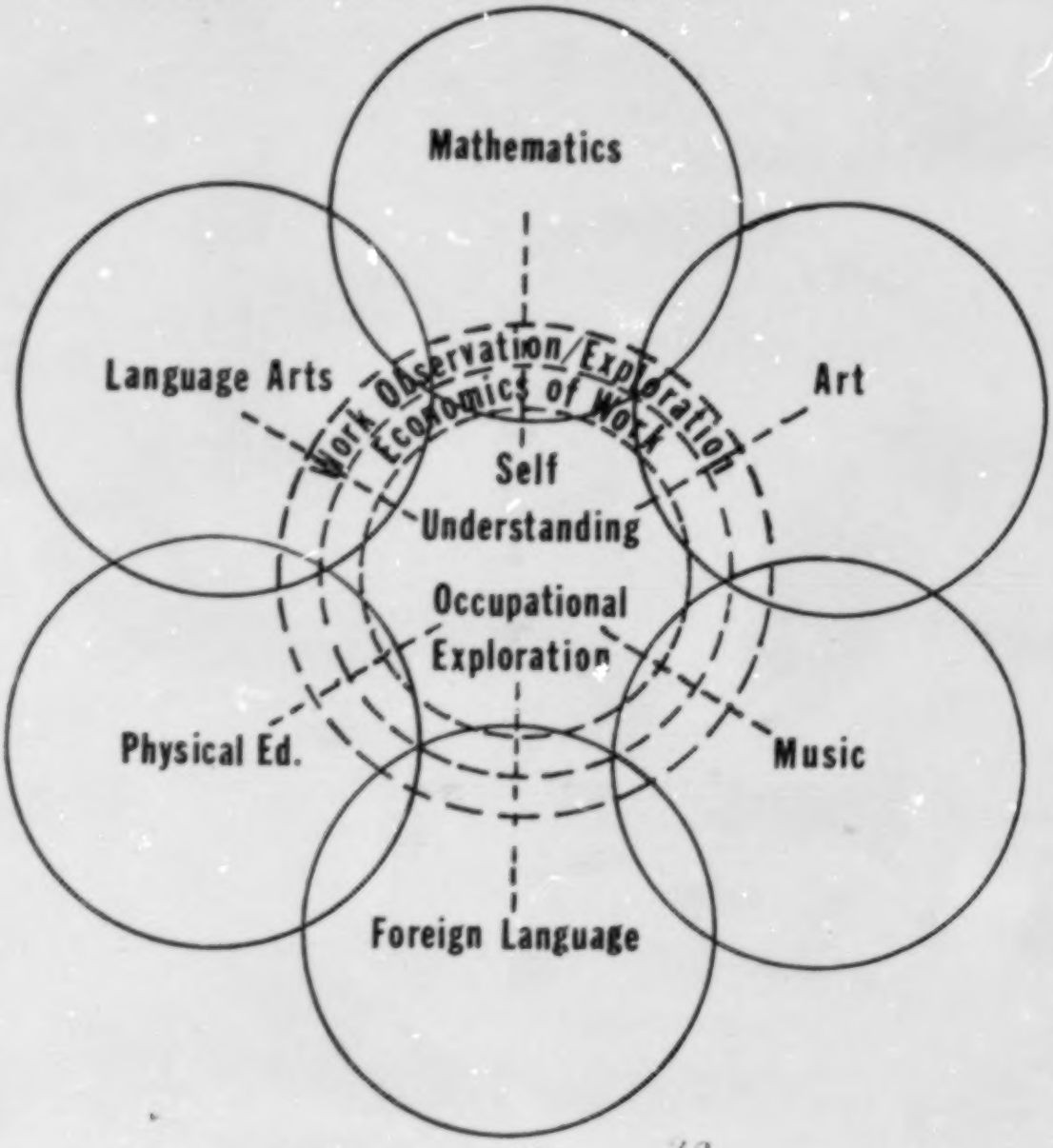
Companion instruction in the basic principles of the economics of work should also be an integral part of the instructional program. Such programs as the Manpower and Economic Education (MEE) or the Oregon Economic Education Program should be utilized in familarizing students with the basic economic principles that will so greatly affect their future lives. Both are obtainable through contact with the State Department of Education.

The organizational concept of utilizing the previously mentioned subject matter areas is shown below.



This diagram depicts the depth of exploration possible through these curricular disciplines. It is not intended to compare the proportions of time spent in career-centered activities as opposed to other activities; only to illustrate that both can exist within the curriculum.

All areas of the curriculum can be involved. Some instructional programs have not the depth of career exploration possibilities, however, as have others. The below configurations demonstrate this concept:



A TOTAL SCHOOL CONCEPT OF CAREER EXPLORATION

The career exploration program must become a total staff program rather than a single class experience.

In order that all subjects taught might be related to careers, it is suggested that every teacher, regardless of the subject taught, look for ways of relating the subject to careers. The suggestions listed below are intended to provide a sample. Resourceful teachers will expand the list greatly. One resource that would be helpful to all teachers is a sunburst of "Occupations Related to Interests and Abilities in Most Subjects." It is available through Oregon State University or the State Department of Education.

The SCIENCE teacher can

1. Point out the many occupations in various fields of science. For example: The student interested in biology could become a farmer, veterinarian, forester, county extension agent, ecologist, doctor, nurse, research biologist, food technologist, pharmacist, wildlife management specialist, dental assistant, health teacher, biochemist--to name just a few.
2. Point out occupations involved when field trips are taken, when films are shown, etc.
3. Discuss the career prospects in fields of science that seem to be growing such as oceanography and ecology.
4. Have youngsters do scientific demonstrations and experiments so they may "explore" a kind of scientific work.
5. Help students find out what science courses are needed for occupations of interest.
6. Have students discuss and list the many scientific occupations related to a flight to the moon.

7. Encourage students to participate in on-site work observations wherein science theory is being applied in a work situation. Encourage oral reports upon return.
8. Invite resource people into the classroom to explain their life roles and demonstrate how scientific laws are utilized in performing their work.
9. Utilize the educational trip to acquaint groups of students to the working conditions wherein science theory is put into practical application.
10. Through individualized instructional materials, familiarize each student with the sciences involved in occupations of interest to him or her.
11. Work with other teachers who are conducting exploratory experience to provide laboratory and on-site experiences wherein scientific knowledges and skills are required in occupations common to other subject matter areas.

The MATHEMATICS teacher can

1. Point out occupations which involve varying amounts of mathematics. For example: carpenter, electrician, bookkeeper, bank clerk, insurance salesman, mathematics teacher, draftsman, pilot, chemist, engineer--to name just a few.
2. Invite resource speakers and have then discuss the importance of mathematics in their job or in their business.
3. Have a housewife talk about household uses of mathematics.
4. Visit a computer center and discuss the growing use of computers, showing how mathematics relates to that field.
5. Permit students to participate in on-site work observations wherein mathematical principles are being applied. Encourage oral reports upon return.
6. Through individualized instructional materials, assist each student to become familiar with the mathematics peculiar to his/her occupational interests.

7. Work with the industrial arts, homemaking, business, and other teachers who are introducing occupationally related mathematics to students you are or will be teaching.

The SOCIAL STUDIES teacher can

1. Have students develop a list of occupations closely related to social studies. Examples are: reporter, social worker, lawyer, city manager, geologist, clergymen, politican, foreign service.
2. Discuss the occupational roles of community and civil workers, public employees, political officials.
3. Show the relationships between a person's occupation and his family, citizen and avocational life roles.
4. Relate the local, area, or national economy and the world of work.
5. Show how geography influences occupations and economy.
6. Provide speakers or activities which emphasize the human relationships important to success on the job.
7. Encourage students to observe on-site application of social principles in the various life roles. Assign oral or written reports on their observations.
8. Through individualized instructional methods, familiarize each student with the social sciences peculiar to each career area within his or her interest.

The ENGLISH teacher can

1. Point out occupations where the proper use of the English language is particularly important. A few examples are: salesman, secretary, reporter, actor/actress, receptionist, radio or TV announcer, preacher, teacher, lawyer.
2. Have students write letters applying for or inquiring about jobs.

3. Assign reading that reveals information about occupations.
4. Conduct role-playing where students interview or apply for jobs.
5. Have a secretary talk to the class about her need and use of proper grammar.
6. Encourage students to observe on-site application of English in an occupational setting and report either orally or written to the class.
7. Work with other teachers in reinforcing language arts in every class.

The INDUSTRIAL ARTS teacher can

1. List and discuss occupations related to or requiring background in industrial arts. A few examples are: farmer, carpenter, sheet metal worker, plumber, machinist, mechanic, draftsman, architect, electrician, industrial arts teacher, welder, millwright.
2. Provide activities giving students experience in using tools basic to shop and industry.
3. Set up a business within the class where students form a corporation and invest, purchase materials, produce by production line, advertise, sell product.
4. Arrange for students to spend a day out of school with someone working in an industrial occupation in which the student is interested.
5. Introduce students to industrial occupations, their availability and required skills and knowledges and commence instruction in the attitudes and processes of industry through application of the four basic industrial technologies; materials and processes, electricity/electronics, graphic communications, and mechanical power.
6. Provide practical and conscious application of mathematical, physical, chemical, and biological principles to classroom and laboratory problems.

The HOMEMAKING teacher can

1. Point out occupations closely related to homemaking. Some examples are: baby sitter, waitress, practical nurse, housewife, cook, beautician, stewardess, dietician, clothing designer, interior decorator, home extension agent.
2. Provide field trips, films, speakers which point out employment opportunities such as those listed above.
3. Provide laboratory experiences and/or work experience opportunities in areas such as child care, decorating, housekeeping, menu planning, cooking, etc.
4. Invite a "resorce person" from a clothing store, beauty school, or charm school to speak about and demonstrate charm and poise.
5. Through individualized instructional methods, introduce students to the specific requirements of occupations that require related knowledges and skills.
6. Encourage on-site observations of jobs that require homemaking and related skills and assign oral and/or written reports of observations.

The ART teacher can

1. Point out occupations related to art or which are facilitated by art. Examples are: window trimmer, cartoonist, painter, photographer, architect, jeweler, advertising layoutman, dentist, sign painter, fashion designer.
2. Bring in a college art professor to discuss occupations in which art is used.
3. Arrange for art students to make advertising displays, posters, and signs for community businesses.

4. Organize an art fair within the school where artists in the community come and demonstrate their talent and talk to students.

The MUSIC teacher can

1. Identify occupations related to the field of music. A few examples are: sales clerk, piano tuner, choir director, dance band player, actor/actress, composer, singer, music teacher, dancer.
2. Have students interview adults with occupations of interest in the area of music.
3. Invite resource people in music related occupations to speak to students about job opportunities, advantages, disadvantages, needed educational background, salary, etc.
4. Find a resource person who has music as a hobby or avocation who can relate its significance in his life.
5. Help students arrange on-site visitations of occupations wherein musical training is beneficial.

The PHYSICAL EDUCATION teacher can

1. Inform students about and provide opportunities for exploration of occupations related to physical education. Some examples: coach, referee, physical education teacher, professional athlete, sporting goods salesman, recreation specialist, sports announcer or writer, physical therapist.
2. Train and supervise interested students in coaching and/or refereeing teams, such as Little League, etc.
3. Arrange field trip to hospital for students interested in physical therapy.
4. Invite someone with a sedentary occupation to speak to the class about the importance of physical activity.

The HEALTH teacher can:

1. Cooperate with the health occupations cluster teacher and the science teacher in informing students about, and providing for exploration of occupations within health.
2. Invite members from the health community to visit the classroom and relate their duties and experiences.
3. Stress the importance of a healthy mind and body as a prime qualification for any area of employment.
4. Relate the body structure, function, and care to occupations that require these knowledges and skills.
5. Through individualized instructional methods, introduce students to the specific requirements of occupations that require related knowledges and skills.
6. Encourage on-site observations of jobs that require health-related skills and assign oral and/or written reports of observations.

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EXPLORATION ACTIVITIES FOR SMALL SCHOOLS

Special provisions must be made for those schools who have neither the enrollment, facilities, or financial resources to conduct the exploration activities herein presented. As such, alternative programs must be developed. The combination-cluster approach to cluster orientation/exploration is one such alternative. This is accomplished through the grouping of closely related clusters.

One such grouping would combine explorations in the metals, industrial mechanics, and construction into a single class or "cruise."

If an industrial arts or general shop program is operative within the district, it could conduct the exploratory activities on much the same basis as in the larger setting. If such programs are nonexistent, the physical science program could be altered to provide some of the same experiences. In either case, particularly where on-site exploration stations are limited, ingenuity is required to provide a more broad exposure to careers than is generally available in the small communities. Several such examples follow:

One district has leased large vans, which are alternately equipped to represent the various clusters, and are located at the various schools for varying periods of time. Students are permitted to work with tools and projects that relate to cluster programs that will later be available to them.

Several districts have utilized the video tape to provide exposure to occupations and/or basic skills uncommon to the local community. In some cases students have been utilized to stage and/or record the programs. Most have had to leave their local setting to portray the necessary breadth.

Other schools, through various designs, have located students in various settings to experience new and different exploratory activities. Some have arranged with larger districts to host a number of students from the smaller district in on-site explorations of various durations. Others have arranged directly with relatives, friends, or service, fraternal, and/or religious organizations to conduct similar programs. Where relatives or close friends are willing to assume direct responsibility, students have experienced night work, split shifts, overtime hours, and other inconveniences that are sometimes common to various areas of work.

A second natural multi-cluster exploratory experience for the smaller school is the General Clerical Cluster. This approach combines the Clerical, Secretarial, and Bookkeeping-Accounting clusters. With the proper instructor, a fourth cluster, Marketing, could be added.

In many cases, the clerical instructor, who many times is forced to teach other subjects because he/she does not have sufficient classes to justify full-time employment could be more effectively utilized to instruct exploratory classes. These, combined with some time to supervise on-site student placement, can fully utilze the teacher's expertise in the area of her preparation.

Where insufficient work experience sites are available for student placement, several small schools have set up their own production centers and done work for the various people and businesses in the community. Some have organized as a typical office would and rotate students through the various stations.

The Agriculture/Forestry-Forest Products combination provides a third alternative. This could again present a situation wherein the cluster teacher could conduct his own exploratory experiences in grades 7-10. If this is not feasible, the biological sciences provide a natural avenue for these activities. This combination would appear to have a close relationship to a General Mechanics cluster program inasmuch as each includes mechanical applications.

The Home Economics teacher could provide exploratory experiences common to a Food Service-Clothing-Child Care cluster program. Were a Home Economics program not available in the district, the instructor might provide her own exploration program or utilize the various 4-H programs that have been developed in this and other areas of exploration.

Utilizing Various Other Exploration Programs

Not all career exploration programs are school based. Two such programs are the Boy Scouts of America-sponsored Explorer Scout program and the above-mentioned 4-H Clubs of America.

The Explorer Scout program provides for "General Interest Posts" that explore occupations of interest to the members and "Specialty Posts" for groups who have arrived at a common area of interest. Both, but particularly the "General Interest Post", could provide broad exploratory experiences. The program has developed some simple yet effective interest surveys and other materials and procedures which could have application to a school setting. Perhaps it would not be out of order for a small school to sponsor one or more Explorer Posts.

The 4-H program should also not be overlooked as an exploratory program. Whereas the initial program was more rural oriented, more recent developments have made it a very broad program. Through its many years of existence, a multitude of programs and materials have been developed that could properly be utilized for various career explorations. Most larger town and county seats have Extension Agents in charge of 4-H club work who would cooperate in utilizing the program as an exploratory vehicle.